

**WHAT IS CLAIMED IS:**

Sub  
A7  
1. An optical fiber array comprising a holding member that consists of a substrate forming a sectional V shaped housing groove for housing an optical fiber on a top face, said optical fiber having an optical fiber tip end bare portion housed in said holding member, and filling an adhesive between the substrate and a cover plate so as to fix the optical fiber to the housing groove, wherein a distance between a center axis of the housing groove that is an outermost portion and an end of the substrate is 5 times or more than the radius of the optical fiber, and a distance Y between the substrate and the cover plate is  $L / 6 \leq Y \leq L$  relevant to a distance L from a contact point between the housed optical fiber and the housing groove to the cover plate.

2. An optical fiber array as claimed in claim 1, wherein a height of a site protruding from the substrate of the optical fiber housed in the housing groove is substantially equal to the distance Y between the substrate and the cover plate.

Sub  
3. An optical fiber array as claimed in claim 1 or claim 2, wherein the distance Y between the substrate and the cover plate is  $L / 4 \leq Y \leq L$ .

4. An optical fiber array as claimed in any of claims 1 to 3, wherein the adhesive is epoxy-based.

5. An optical fiber array as claimed in any of claims 1 to 4, wherein the width of the cover plate is different from that of the substrate.

6. An optical fiber array as claimed in any of claims 1 to 5, wherein a placement face for placing a cover portion of optical fiber is provided at the rear part of a housing groove forming face, and a step is provided between the housing groove forming face and the placement face, thereby placing and housing the optical fiber.

A4  
A3

A4  
D2